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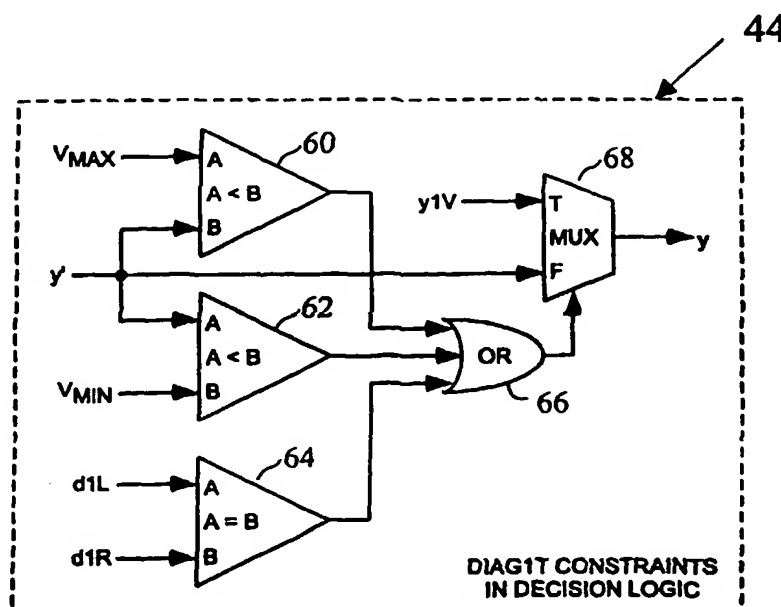
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(54) Title: UPCONVERSION WITH NOISE CONSTRAINED DIAGONAL ENHANCEMENT



(57) Abstract: A method of interpolating a given output pixel value when upconverting video from interlaced to progressive includes the step of determining averages for vertically adjacent pixels, left diagonally adjacent pixels, and right diagonally adjacent pixels for the given output pixel and the step of determining differences between the vertically adjacent pixels, the left diagonally adjacent pixels, and the right diagonally adjacent pixels (28, 30, and 26). An interpolated value is further selected (42) for the given output pixel among the averages based on a minimal difference of an absolute value among the differences and further constrains (44) the interpolated value to the value of the average of the vertically adjacent pixels (y1V) if a value for the given output pixel is not between a range of values defined by adjacent pixels above and below the given output pixel or if the selected minimal difference is not unique.